

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claim 1, 11, 21, 23, 25-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Roberts (US 2003/0152039).

For claim 1 and similarly claim 23, Roberts discloses A method, comprising: enforcing a charging policy (see section 0012-14 "determining said rules and each packet address, a respective billing tariff and account for that packet" and section 0020-0021) at a network

element (see section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104) to be applied to a data flow reaching the network element (see section 014 “packet analyzer for determining from said rules and each packet address, a respective billing tariff’ and section 0021 “analysis of packet, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; section 0024, and section 0028, section 0036; there are multiple possible flows for providing different services / content i.e. see figure 1, different content / application servers) during a packet data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”; during a PDP context user can have multiple flow from / to different content / applications), the packet data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”) comprising a plurality of data flows (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”) including the data flow (see section 0004 “billing system to differentiate between different services on the same PDP context”;

sections 0062-79 “PDP context”; section 0087 “context is set-up”; during a PDP context user can have multiple flow from / to different content / applications), with each data flow of the plurality of data flows being distinguishable by a set of flow parameters (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application is distinguished by URL / IP and port number; and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), wherein said charging policy defines charging rules for the data flow_(see section 0012-14 ”determining said rules and each packet address, a respective billing tariff and account for that packet” section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow

(s) will attract different billing rates; and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104);

observing the data packets reaching said network element (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), the data packets including at least one flow parameter (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a

respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”),

wherein the at least one flow parameter includes a flow identifier (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; section 0024, section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places

cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), and wherein the at least one flow parameter indicates the charging policy to be enforced on the flow (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”)

and detecting the data flow from flow parameters included in the data packets (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; packets matched to a flow of a server / application distinguished via URL, IP and port and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

mapping the data packets to the data flow in accordance with the at least one flow parameter included in a respective data packet (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; section 0021 “analysis of packets, preferably at the GGSN...URL or IP

address and port number of the server...protocol”; packets matched to a flow of a server / application distinguished via URL, IP and port and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

matching the data flow to the charging policy (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”;

GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”); and

applying said charging policy to said data flows to generate charging information (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”).

For claim 23, Roberts discloses a computer program embodied on a computer-readable medium, the computer program (see section 0019 “methos may be performed...control of software in machine readable form on a storage medium”) configured to control a processor (see figure) to perform operations (see section 0019 “methos may be performed...control of software in machine readable form on a storage medium”)

For claim 11, Roberts discloses enforce a charging policy at a network element (see section 014 “packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packet, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; section 0024, and section 0028, section 0036; there are multiple possible flows for providing different services / content i.e. see figure 1,

different content / application servers) to be applied to a data flow reaching the network element (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”) during a packet

data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”), the packet data protocol context comprising a plurality of data flows (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”) including the data flow (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”; during a PDP context user can have multiple flow from / to different content / applications), data flows of the plurality of data flows being distinguishable by a set of flow parameters (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”),

wherein said charging policy defines charging rules per data flow of the plurality of data flows (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

observe said data packets reaching said network element (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for

determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), the data packets including at least one flow parameter (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section

0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”),

wherein the at least one flow parameter includes a flow identifier (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduce reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), and wherein the at least one flow parameter indicates charging policy to be enforced on the flow (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol”; flow of a server / application distinguished and section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charged based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”),

detect the data flow from flow parameters included in the observed data packets (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

map the data packets to the data flow in accordance with the at least one flow parameter included in a respective data packet (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

match the data flow to the charging policy (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0024; different application / servers and therefore the data flow (s) will attract different billing rates and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

apply said charging policy to said data flows (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0024; different application / servers and therefore the data flow (s) will attract different billing rates and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”);

generate charging information (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”), in response to applying said charging policy (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates ; sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”).

For claim 21, Roberts discloses enforcing means (see figure; reference char 1-5,10, 13) configured to enforce a charging policy at a network element to be applied to data packets reaching the network element (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”) during a packet data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”), the packet data protocol context comprising a plurality of data flows (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”) including the data flow (see section 0004 “billing system to differentiate between

different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”; during a PDP context user can have multiple flow from / to different content / applications), with each data flow of the plurality of data flows being distinguishable by a set of flow parameters (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”),

wherein said charging policy defines charging rules for the data flow (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets,

preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

observation means (see figure; reference char 1-5,10, 13) configured to observe a data flow reaching said network element (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”;

sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), the data packets each including at least one flow parameter (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”),

wherein the at least one flow parameter includes a flow identifier (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), and wherein the at least one flow parameter indicates the charging policy to be enforced on the data flow (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; section 0027-28, section

0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”),

the observation means (see figure; reference char 1-5,10, 13) being further configured to detect the data flow from flow parameters included in the data packets (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section

0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

mapping means (see figure; reference char 1-5,10, 13) configured to map each of the data packets to the data flows in accordance with the at least one flow parameter included in a respective data packet (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

matching means (see figure; reference char 1-5,10, 13) configured to match said data flows of data to the charging policy (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

application means (see figure; reference char 1-5,10, 13) configured to apply said charging policy to said data flows (see section 0012-014 “each packet having an

address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”);

and generation means (see figure; reference char 1-5,10, 13), responsive to said application means (see figure; reference char 1-5,10, 13), configured to generate charging information (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”).

For claim 25 and similarly 26-27, Roberts discloses herein observing the data packets includes observing the data packets reaching said network element (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), the data packets including the at least one flow parameter, the at least one flow parameter including a flow identifier and a destination address (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28,

section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; parameters such as IP addresses, URL are present and can be used when enforcing charging), wherein the flow identifier does not include the destination address (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate

filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; parameters such as IP addresses, URL are present and can be used when enforcing charging).

For claim 28 ,Roberts discloses selecting the charging policy based on the at least one flow parameter, including the flow identifier, of the data packets (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP

address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”); and metering of the data packets of the data flow to generate a flow record comprising information about the data flow (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”,

section 0017 “credit transfer”, section 0021, 0024, 0037, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”).

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wherein applying said charging policy includes applying said charging policy to the flow record to generate the charging information for the data flow (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a

customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0037, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”).

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For claim 28 ,Roberts discloses select the charging policy based on the at least one flow parameter, including the flow

identifier, of the data packets (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section

0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”); and meter of the data packets of the data flow to generate a flow record comprising information about the data flow (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid

account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0037, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill..accounting...records.”).

;

wherein the processor configured to cause the apparatus to apply said charging policy includes being configured to cause the apparatus to apply said charging policy to the flow record to generate the charging information for the data flow.

(see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on

storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0037, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”).
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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 2, 6, 12, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) in view of Jogalekar (US 7,002,977)

For claim 2, 6, 12, 16, Roberts discloses all the claimed invention as described above.

Roberts is silent about:

For claim 2 and similarly for claim 12, causing said generated charging information to be forwarded to a charging system of the communication network.

For claim 6, upon enforcing said charging policy, data volume counters are initialized.

For claim 12, the forwarding unit.

For claim 16, an initialization unit configured to initialize data volume counters and/or time counters responsive to enforcing said charging policy.

Jogalekar teaches a network element with the following features:

As regarding claim 2 and 12, Jogalekar discloses causing (see column 8 lines 38-48 “billing engine..transmit...to the network manager”) said generated charging information to be forwarded (see column 8 lines 18-25 “billing engine may compile ...billing and accounting information”) to a charging system (see column 8 lines 38-48 “network manager” and column 4 lines 47-49 “network manager...receives...information...for accounting and billing purposes”) of the communication network (see column 4 lines 1-7 “network”)

As regarding claim 6, Jogalekar discloses initializing (see column 12 lines 61-61 “creates service-specific counters such as either incrementing...or decrementing...”) data volume counters (see column 11 lines 41-50 “service-specific counters...counters...counts the packets”) upon enforcing said charging policy (see column 1 lines 61-67 “charging a premium rate” and column 11 lines 11-13 “policy engine...checks...policy table” and Figure 6 608,614, 616).

For claim 12, Jogalekar discloses the forwarding unit (see column 8 lines 38-48 “billing engine..transmit...to the network manager”)

For claim 16, an initialization unit configured to initialize data volume counters (see column 12 lines 61-61 “creates service-specific counters such as either incrementing...or decrementing...”) responsive to enforcing said charging policy (see column 1 lines 61-67 “charging a premium rate” and column 11 lines 11-13 “policy engine...checks...policy table” and Figure 6 608,614, 616).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Roberts by using the features, as taught by Jogalekar in order to provide a method of a sophisticated accounting and billing method where different traffic, such as high priority traffic, is charged at a premium rate (see Jogalekar col 1).

3. Claim 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) in view of Gai et al. (US 7,185,073).

For claim 3 and 13, Roberts teaches the claimed invention as described in paragraph 4.

Roberts are silent about:

As regarding claim 3, enforcing is performed upon start-up of the network element.

As regarding claim 13, Gai et al discloses said enforcing means are responsive to start-up of the network element to perform the enforcing.

Gai et al. from the same or similar field of endeavor discloses enforcing a policy the following features:

As regarding claim 3, Gai et al discloses enforcing is performed (see column 6 lines 21-26 “rules that are utilized by the intermediated devices”) upon start-up (see column 6 lines 21-26 “Upon initialization”) of the network element (see column 6 lines 21-26 “intermediated devices”)

As regarding claim 13, Gai et al discloses said enforcing means (see column 6 lines 21-26 “rules that are utilized by the intermediated devices”) are responsive to start-up (see column 6 lines 21-26 “Upon initialization”) of the network element (see column 6 lines 21-26 “intermediated devices”) to perform the enforcing (see column 6 lines 21-26 “rules that are utilized by the intermediated devices”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Roberts by using the features, as taught by Gai et al., in order to provide a system which can implement network wide management policies (like queueing strategies), without the need to manually configure each device which is time consuming and error prone (see Gai column 5 lines 35-64).

4. Claim 4 and 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) in view of Hundscheidt (US 7,369,541).

For claim 4 and 14, Roberts discloses all the claimed invention as described above.

Roberts is silent about:

For claim 4, the enforcing is performed upon activation of the packet data protocol context.

For claim 14, enforcing unit is further configured to be responsive to activation of the

data protocol context to perform the enforcing.

Hundscheidt from the same or similar field of endeavor discloses the following features:

For claim 4, Hundscheidt discloses the enforcing is performed upon activation of the packet data protocol context (see col 11 line 15-35 “Activate PDP Context accept...starts to charge the attached mobile station”).

For claim 14, Hundscheidt discloses enforcing unit is further configured to be responsive to activation of the data protocol context to perform the enforcing (see col 11 line 15-35 “Activate PDP Context accept...starts to charge the attached mobile station”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Roberts by using the features, as taught by Hundscheidt, in order to provide an efficient introduction and performing of multicast in a point —to-point oriented packet-switched telecommunication network (see Hundscheidt col 5)

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) and Hundscheidt (US 7,369,541) as applied to claim 4 above, further in view of Schweitzer et al. (US 2002/0013849 A1).

For claim 5, Roberts discloses the packet data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”).

Robert and Hundscheidt does not explicitly disclose the following:

As regarding claim 5, enforcing is performed dynamically during the lifetime of the data session.

Schweitzer from the same or similar field of endeavor discloses the following:

As regarding claim 5, Schweitzer discloses enforcing (see section 0035 lines 4-15 “voice over IP call...single session...checked...does not exceed..) is performed dynamically (see section 0035 lines 4-15 “...single session...checked every minute...does not exceed..) during the lifetime (see section 0033 lines 1-4 “session..definite time bound”) of the data session (see section 0035 lines 4-15 “voice over IP call...single session”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify/combine the system of Roberts and Hundscheidt by using the features, as taught by Schweitzer, in order to provide a method of limiting/allowing certain user certain amount of bandwidth, quality of service to certain users (for example depending on the account type or fees payed) (see Schweitzer sections 0043-46)

6. Claims 8-10, 15, 18- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) in view of Schweitzer et al. (US 2002/0013849 A1).

For claim 9 and similarly 19, Roberts discloses creating (see section 0036 “content-based billing, content value...relevant URLs”) a plurality of charging policies (see section 0012-14 ”determining said rules and each packet address, a respective billing tariff and account for that packet” section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0028, 0058

“charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104), each charging policy of the charging policies (see section 0012-14 ”determining said rules and each packet address, a respective billing tariff and account for that packet” section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104) comprising at least one flow parameter (see section 0036 “IP address or URL...relevant URLs”), selecting a charging policy based on offered services (see section 0036 “operator enters a deal to provide premium rate access charges”), and causing said selected charging policy to be distributed to at least one network element (see section 0036 “pre-provisioned...provisioning the relevant URLs as required into the GGSN”) to be enforced at said at least one network element (see section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”

and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104) for charging of data reaching said at least one network element (see section 014 “packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packet, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0028, section 0036) during a packet data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”).

For claim 10 and 20, Roberts discloses wherein said charging policy is selected (see section 0036 “operator enters a deal to provide premium rate access charges”) for a type of said network element (see section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol”; flow of a server / application distinguished and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104).

Robert does not explicitly disclose the following:

For claim 8 and 18, where the charging policy comprises at least one of a charging/accounting type, an accounting event trigger, a charging metrics, and a tariffing indication;

For claim 9 and similarly 19, where the charging policy comprises at least one of a charging/accounting type, an accounting event trigger, a charging metrics, and a tariffing indication; selecting a charging policy based on subscriber information.

As regarding claim 15, Schweitzer discloses said enforcing means the enforcing during the life-time of the data session.

Schweitzer from the same or similar field of endeavor discloses the following features:

For claim 8 and 18, Schweitzer discloses where the charging policy comprises at least one of a charging metrics (see section 0043-45 lines 5-6 “policy..billed for usage” and section 0063 lines 1-5 “billing on a per session basis... IP telephony, that might be charge per minute per leg. For HTTP that might be a charge per megabyte) and a tariffing indication (see section 0043-45 lines 5-6 “policy..billed for usage” and section 0063 lines 1-5 “billing on a per session basis... IP telephony, that might be charge per minute per leg. For HTTP that might be a charge per megabyte)

For claim 9 and similarly 19, Schweitzer discloses Schweitzer discloses where the charging policy comprises at least one of a charging metrics (see section 0043-45 lines 5-6 “policy..billed for usage” and section 0063 lines 1-5 “billing on a per session basis... IP telephony, that might be charge per minute per leg. For HTTP that might be a charge per megabyte) and a tariffing indication (see section 0043-45 lines 5-6 “policy..billed for usage” and section 0063 lines 1-5 “billing on a per session basis... IP telephony, that

might be charge per minute per leg. For HTTP that might be a charge per megabyte); selecting a charging policy based on subscriber information (see section 0035 lines 10-15 “prepaid calling” and section 0043 lines 5-6 “policy might control how users...are billed for usage”, section 0045 “policy...user and group based restriction and evaluations”).

As regarding claim 15, Schweitzer discloses said enforcing means (see section 0102 “hardware...combination of hardware and software”) are dynamically performing (see section 0035 lines 4-15 “...single session...checked every minute...does not exceed..) the enforcing (see section 0035 lines 4-15 “voice over IP call...single session...checked...does not exceed..) during the life-time (see section 0033 lines 1-4 “session..definite time bound”) of the data session (see section 0035 lines 4-15 “voice over IP call...single session”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify/combine the system of Roberts by using the features, as taught by Schweitzer, in order to provide a method of limiting/allowing certain user certain amount of bandwidth, quality of service to certain users (for example depending on the account type or fees payed) (see Schweitzer sections 0043-46)

7. Claim 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) in view of Chaskar (US 2002/0122432)

For claim 7 and 17, Roberts discloses all the claimed invention as described above.

For claim 7 and 17, Roberts further discloses wherein said data flows are Internet Protocol (IP) based packet data flows (see section 0012 “packet address” section 0021 “based on the destination of the service as described by the URL or IP address and port number of the server”; section 0036 “IP address or URL”; sections 0062-79 “URL”; section 0101),

Roberts does not explicitly disclose the following:

For claim 7 and similarly 17, said flow parameters comprise at least one of an IP header field, a transport header field, and an application level information.

Chaskar from the same or similar field of endeavor discloses the following features:

For claim 7 and similarly 17, Chaskar discloses said flow parameters comprise at least one of an IP header field, a transport header field, (see section 0019 “fields..packet header such as source/destination IP addresses, TCP/UDP port address...” and section 0025)

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Roberts by using the features, as taught by Chaskar, in order to provide a technique that supports various QoS classes across the GPRS core network in a scalable and efficient way (see Chaskar sections 0004-10).

Response to Arguments

Applicant's arguments filed 05/07/2010 have been fully considered but they are not persuasive.

For claim 1 and similarly 11, 21, the applicant argues on page 10 that Roberts describes an interaction at a packet level, rather than at a flow level. The applicant uses Roberts

paragraphs 21, 28 and claim 1 as support and concludes that “As such, Roberts does not disclose, and the

system of Roberts would be incompatible with, the use of a flow identifier within the packets for identifying a flow, and facilitating implementation of a charging policy at the flow level. A solution in accordance with the teachings of Roberts would have no purpose for a flow identifier as recited in the independent claims, because the billing tariff implemented by Roberts is applied at the packet level. “ The examiner would like to point out that claim 1 of Roberts was not relied up in the rejection of the claims. The examiner does not agree with the above conclusion or reasoning as presented by the applicant. As pointed out in the above office action and thought throughout the Roberts reference, different billing tariffs / rates (e.g. premium rate, free etc) for different types of content / applications / destinations (e.g. see figure 1 where different servers provide different content / applications or services and as explained in section 0024). Throughout the entire specification Roberts discusses how different types of traffic are charged / billed based on their type. The examiner takes the stance that these different types are data flows which have their specific charging policy, where packets belonging to this flow (e.g. specific application / content / traffic associated with specific server) are charged billed accordingly. Further, the examiner takes the stance theses flows are identified and distinguished from other traffic by an identifier such as URL, IP address or port number such as described in section 0021. Therefore, the examiner takes the stance the Roberts associates a packet to a flow (e.g. specific application / content / traffic associated with specific server) and applies a charging policy (e.g. premium rate, free etc)

since it belongs to this specific flow. Thus the examiner maintains that such teachings are equivalent to the claim language of "flow parameter indicates the charging policy to be enforced on the data flow....applying said charging policy to said data flows" and its equivalents in the other independent claims. The argument that Roberts looks at individual packets and applies a tariff rate / charging policy is not persuasive. Firstly the claim does not exclude that packets belonging to a flow are charged on a individual basis, thus therefore even if Roberts taught this it would cover the claimed language since the flow is being charged.

As regarding the arguments of detecting a data flow, mapping the packets to the data flow, and matching the data flow to a charging policy, and applying the charging policy to said flow the examiner fails to see the difference between the claimed language and the Robert's disclosure. As previously discussed, in Roberts flows are distinguished by URL, IP address and port number, and as clearly stated in the cited section and throughout Roberts, a flow is set up / detected based on parameters or packets are associated to a flow via identifiers (corresponds to detecting, see for example section 0021, 0062-79), packets are indentified to a flow via identifiers (corresponds to mapping, see for example section 0021, 0062-79), selecting and applying charging policy based on the flow (corresponds to the matching and applying , for example see section 0024, 0062-79).

In the view of the above, the examiner fails to see how the claimed language is differentiated from the overall disclosure and specific teachings of Roberts.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENAN CEHIC whose telephone number is (571)270-3120. The examiner can normally be reached on Monday through Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KWANG BIN YAO can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenan Cehic/

Examiner, Art Unit 2473

/KWANG B. YAO/

Supervisory Patent Examiner, Art Unit 2473